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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/659,132	09/11/2000	Carl F. Stachew	2964R	4348

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EXAMINER
JOHNSON, JERRY D

ART UNIT	PAPER NUMBER
1764	17

DATE MAILED: 06/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application n N .	Applicant(s)	
	09/659,132	STACHEW ET AL.	
	Examiner	Art Unit	
	Jerry D. Johnson	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the c rrespondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 March 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

In view of the Brief filed on March 31, 2003, PROSECUTION IS HEREBY REOPENED. Applicants' arguments traversing the rejection under 35 U.S.C. 112, first paragraph are persuasive. Accordingly the rejection has been withdrawn. However, upon further consideration, rejections under 35 U.S.C. § 103 over Diana et al. and Diana et al. in view of Steckel, necessitated by applicants' amendment filed January 14, 2003, are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-16, 25, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Diana et al.

Diana et al, U.S. Patent 5,936,041, teach improved lubricating oil dispersants wherein a fractionating polymer is prepared prior to functionalization for making dispersant additives (abstract). The functionalization is preferably via the Koch reaction, but can be carried out by any other methods suitable for introducing mono- or dicarboxylic acid producing groups into the fractionated polymer, such as by reacting the fractionated polymer with a carboxylic reactant selected from the group consisting of a monounsaturated monocarboxylic acid producing compound and a monounsaturated dicarboxylic acid producing compound (column 5, lines 5-13). Preferred polymers have terminal unsaturation, preferably a high degree of terminal unsaturation (column 7, lines 12-13). The polymer material comprises a fractionated polymer having Mn of from about 700 to 10,000, more preferably from about 800 to 5,000, and most preferably from about 1,000 to 4,000 and a MWD of from about 1.2 to 3, more preferably from about 1.2 to 2.5, and containing less than about 10 mole % (preferably less than about 5 mole %, more preferably less than about 3 mole %) of polymer chains having a molecular weight of less than 500 (column 7, lines 56-66). Maleic anhydride is the preferred monounsaturated carboxylic reactant (column 21, lines 38-39). While any effective functionality can be imparted to functionalized, fractionated polymer intended for subsequent derivation, it is contemplated that such functionalities are typically not greater than about 3, preferably not greater than about 2, and typically can range from about 0.5 to about 3, preferably from 0.8 to about 2.0 (e.g. 0.8 to 1). (column 22, lines 15-21). The amine compound can be a heavy polyamine, which is defined as a mixture of higher oligomers of polyalkylene polyamines, having an average of at least about 7 nitrogen atoms per molecule. A preferred heavy polyamine is a mixture of polyethylene polyamines containing essentially no TEPA, at most small amounts of pentaethylene hexamine,

and the balance oligomers with more than 6 nitrogens, the heavy polyamine having more branching than conventional commercial polyamines mixtures (column 24, line 61 to column 25, line 8). While Diana et al. prefer compositions containing less than about 10% of polymer chains having a molecular weight of less than 500, Diana et al. also teach that "it has been found desirable to minimize or reduce, or eliminate completely, the amount of lower molecular weight polymers (e.g., light polymers) or monomers such as unreacted higher olefins from a given polymer molecular weight distribution to improve the performance of the final product." (Column 12, lines 27-31). Accordingly, Diana et al. recognize that the amount of lower molecular weight polymers is a result effective variable, i.e., that progressive lower amounts give progressively better performance.

Therefore, absent evidence of unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to "minimize or reduce" the amount of polymer chains having a molecular weight of less than 500 to the instantly claimed range with the reasonably expectation of improving the dispersant properties of the composition as taught by Diana et al. (See column 2, lines 10-13).

Claims 17-24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Diana et al as applied to claims 1-16, 25, 27 and 28 above, and further in view of Steckel.

Diana et al differ from the instant claims in not teaching dispersants wherein the polyamine reactant is the condensed polyamines of the instant claims.

Steckel, U.S. Patent 5,053,152, teaches that improved additives/dispersants for lubricant and fuel compositions are obtained by condensing a hydroxyalkyl or hydroxyaryl compound with an amine compound (abstract). The condensed amines of Steckel correspond to the

instantly claimed condensed amines (II)(b). The condensed polyamines may be further reacted with, for example, an acylating agent, to give an even higher molecular weight dispersant (column 2, lines 6-11).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the condensed polyamines of Steckel to form a dispersant as taught by Diana et al because Diana et al teach that those amines, i.e., hydroxyamines, as well as heavy amines containing an average of at least about 7 nitrogen atoms per molecule can be used. See column 24, lines 41+ of Diana et al.

Applicant's arguments concerning unexpected results have been fully considered but they are not persuasive.

The burden of proving unexpected results rests on the party which asserts them. In proving such results, it is not enough just to show that certain results are obtained. The results to be probative of nonobviousness must be shown to have been unexpected to the skilled worker in the art. In re D'Ancicco, 439 F.2d 1244, 169 USPQ 303 (CCPA 1971); In re Klosak, 455 F.2d 1077, 173 USPQ 14 (CCPA 1972); In re Juillard, 476 F.2d 1380, 177 USPQ 1570 (CCPA 1973). Moreover, it is axiomatic that evidence presented to rebut a prima facie case of obviousness must be commensurate in scope with the claims the evidence is offered to support. In re Tiffin, 448 F.2d 791, 171 USPQ 294 (CCPA 1971).

The data of the declaration was not generated by a comparison against the closest prior art and declarant does not even assert that the reported results are unexpected. Furthermore, the specification teaches that compositions of the invention reduce degradation of engine seals, yet

the declaration fails to report results for this test and simple notes "the 7.1 % material passed with somewhat better scores in some of the evaluations than the other materials." Clearly applicants have not proven unexpected results for the now claimed compositions.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry D. Johnson whose telephone number is (703) 308-2515. The examiner can normally be reached on 6:00-3:30, M-F, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Caldarola can be reached on (703) 308-6824. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-5408 for regular communications and (703) 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Jerry D. Johnson
Primary Examiner
Art Unit 1764

JDJ
June 5, 2003